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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* ANDREW T. WILSON

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Appeal 2009-003616<sup>1</sup>  
Application 10/684,167  
Technology Center 2800

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Decided: September 22, 2009

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Before JOHN C. MARTIN, JOSEPH F. RUGGIERO, and  
ROBERT E. NAPPI, *Administrative Patent Judges*.

MARTIN, *Administrative Patent Judge*.

DECISION ON APPEAL

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<sup>1</sup> The real party in interest is Intel Corporation. Br. 1.

### STATEMENT OF THE CASE

This is an appeal under 35 U.S.C. § 134(a) from the Examiner's final rejection of claims 1 and 3-30. Claims 1, 3-10, and 16-26 have been canceled,<sup>2</sup> leaving only claims 11-15 and 27-30 for our consideration.

We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

#### *A. Appellant's invention*

Appellant's invention relates generally to portable digital audio play-out devices and more particularly concerns the so-called 'swarm' or ad-hoc networking of physically proximate portable hand-held MIDI music devices for real-time peer-to-peer musical jamming or music-sharing. Specification 1:12-17.

Appellant's Figure 4 is reproduced below.

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<sup>2</sup> "Supplemental Amendment After Final Rejection," filed March 27, 2007.

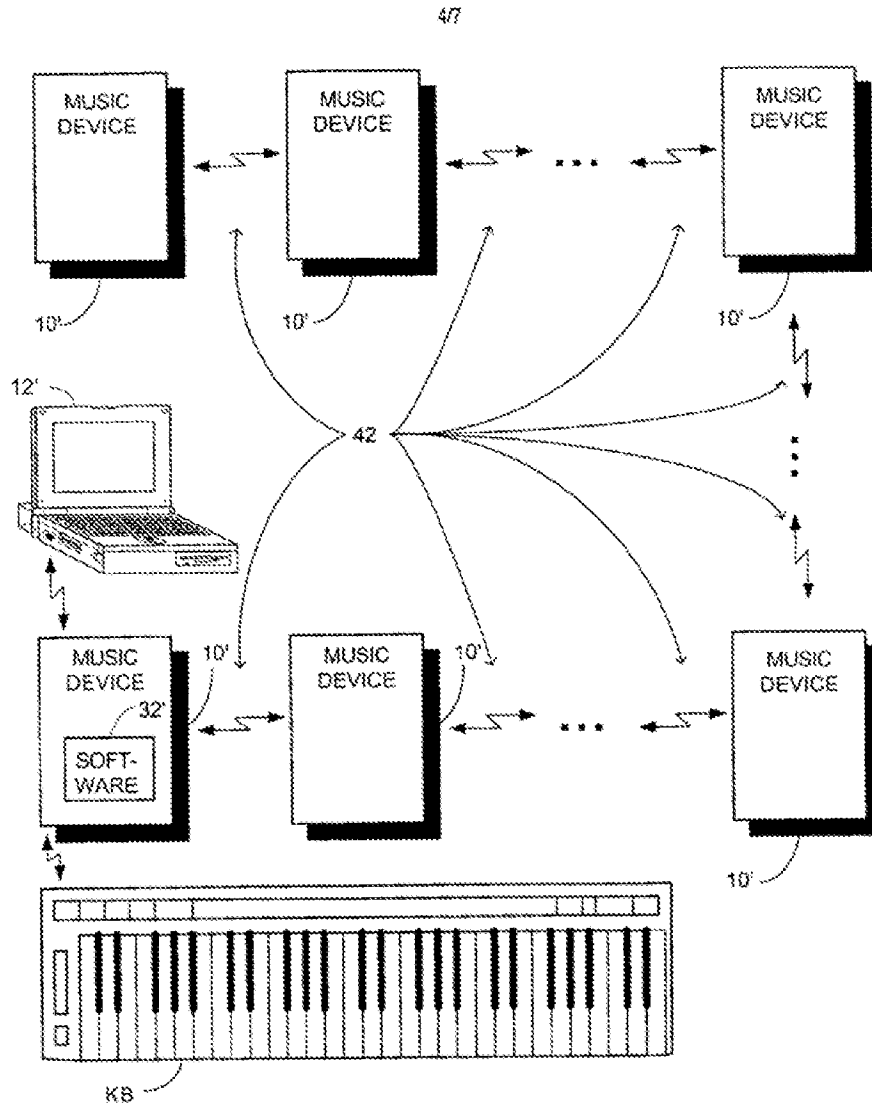


FIG. 4

Figure 4 a system block diagram of a network of plural pocket music synthesizers in accordance with an embodiment of Appellant's invention. Specification 3:1-2.

Plural instances of apparatus 10' are provided in a physically separate but also physically proximate configuration so as to permit communication therebetween either wirelessly (e.g., via Bluetooth) or by wired interfaces. *Id.* at 6:25-31.

Two different topologies are disclosed. *Id.* at 8:25-27. In the first topology, only one instance of apparatus 10' is configured as a master that acquires a musical data stream from one or more other instances of apparatus 10'. *Id.* at 8:28-30. The other instances of apparatus 10' would be configured as slave controllers capable of synthesizing one or more voices and contributing the same via the network to the one instance of apparatus 10' that is configured as a master controller. *Id.* at 9:3-6. The master and slave roles for various instances of apparatus 10' in this topology are subject to change, i.e., a slave may negotiate with the designated master to yield master control to the slave, either between musical jam sessions or even during a given musical jam session. *Id.* at 9:7-10. Thus, in this first topology each instance of apparatus 10' can include a mixer, with only the mixer in the master being active at any particular time.

In the second topology, on the other hand, the mixers in a plurality of apparatus 10' are active at the same time. That is, in the second topology every instance of apparatus 10' is capable of receiving synthesized audio scores from one or more (e.g., every) other apparatus 10'. *Id.* at 9:11-12. As a result, each jam session participant can hear his or her own contribution mixed in real time with the external source, e.g., a downloaded score or audio score contributions from one or more other contributors. *Id.* at 10:3-6.

Figure 5 is reproduced below.

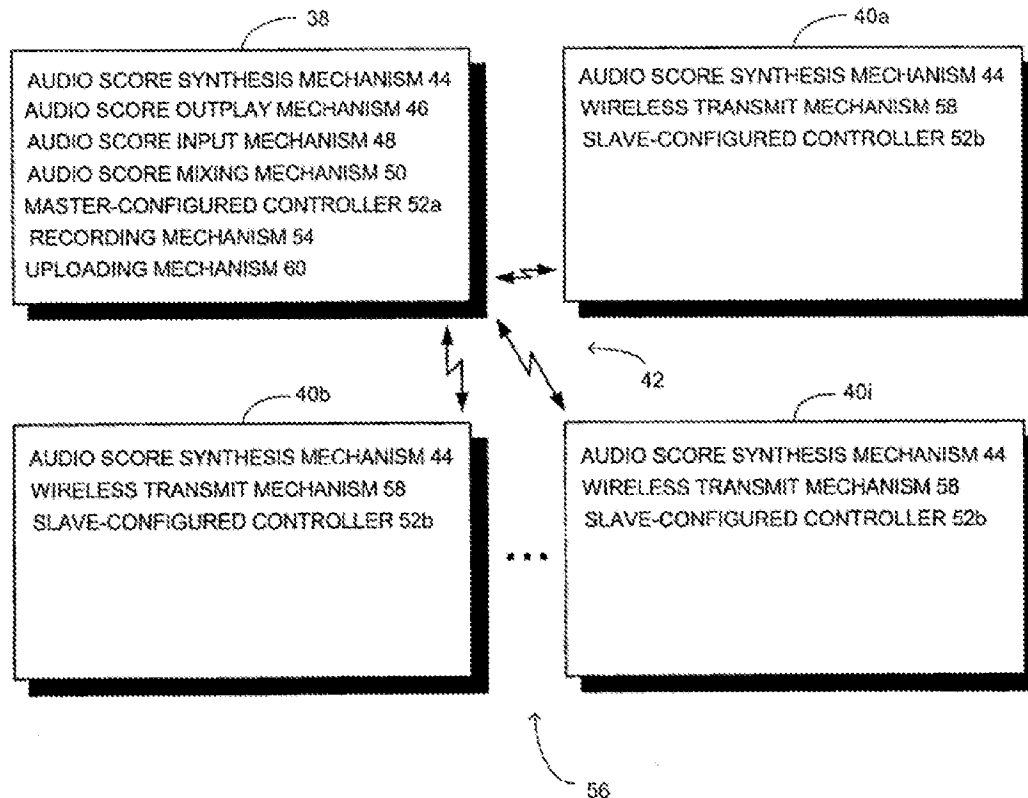


FIG. 5

Figure 5 is “a detailed schematic diagram of a master and a slave music synthesizer within the network of Fig. 4.” *Id.* at 3:3-4.

In Figure 5, only master version 38 is depicted as including (1) an audio score *input* mechanism 48 for wirelessly receiving an audio score from an external source and (2) an audio score *mixing* mechanism 50 for mixing a received-and-inputted audio score with a locally synthesized audio score from synthesis mechanism 44 to produce an outplayable audio score having components of both the synthesized and the received-and-inputted audio

score for outplay by an outplay mechanism 46. However, the Specification explains that, in one embodiment, each of slave versions 40a, 40b, . . . 40i a likewise includes an audio score input mechanism 48 and an audio score mixing mechanism 50. *Id.* at 11:1-10.

*B. The claims*

The independent claims are claims 11 and 27, which read as follows:

11. A system of music devices operatively coupled together, the system comprising:

plural apparatus in physical proximity with each other and capable of at least one-way communication therebetween of an audio score,

at least two such apparatus comprising:

an audio score synthesis mechanism including a playing mechanism for playing the synthesized audio score;

an audio score mixing mechanism coupled with said synthesis mechanism for mixing plural audio scores to produce another audio score having components of each of the plural audio scores; and

an audio score input mechanism coupled with said mixing mechanism to provide one or more input audio scores thereto for mixing with the synthesized and outplayed played audio score,

said synthesis mechanism, said mixing mechanism and said input mechanism being operable in real time to create a

playable audio score having components of plural audio scores produced by said plural proximate apparatus.

27. A musical system comprising:

a wireless network; and

plural portable musical apparatus in physically separated proximity with each other and capable of two-way communication therebetween of an audio score over said wireless network, each musical apparatus including:

an audio score synthesis mechanism; an audio playing mechanism coupled with said network; an audio input mechanism coupled with said network; and

an audio score mixing mechanism coupled with said synthesis mechanism, said input mechanism and said playing mechanism, said mixing mechanism configured to mix a first audio score from said synthesis mechanism with a second audio score from said input mechanism to produce in real time a playable audio score having components of each of the first and second audio scores.

Claims App., Br. 6-8.

*C. The references and rejection*

The Examiner relies on the following references:

|         |                    |              |
|---------|--------------------|--------------|
| Sitrick | US 6,084,168       | Jul. 4, 2000 |
| Ito     | US 2003/0121401 A1 | Jul. 3, 2003 |

Claims 11-15 and 27-30 stand rejected under 35 U.S.C. § 103(a) for obviousness over Ito in view of Sitrick.



## ISSUE

Appellant has the burden on appeal to show reversible error by the Examiner in maintaining the rejection. *See In re Kahn*, 441 F.3d 977, 985-86 (Fed. Cir. 2006) (“On appeal to the Board, an applicant can overcome a rejection by showing insufficient evidence of *prima facie* obviousness or by rebutting the *prima facie* case with evidence of secondary indicia of nonobviousness.” (citation omitted)).

The dispositive issue is whether the Examiner and Appellant correctly found that Ito’s system does not include plural musical apparatus each containing a mixing mechanism.

## ANALYSIS

Ito discloses a system that employs a mixer apparatus for wirelessly receiving and mixing audio signals or “audio signal producing signals” from a plurality of music apparatus, thereby avoiding the need for cable connections. Ito at ¶ 0006.

Ito's Figure 1 is reproduced below.

FIG.1

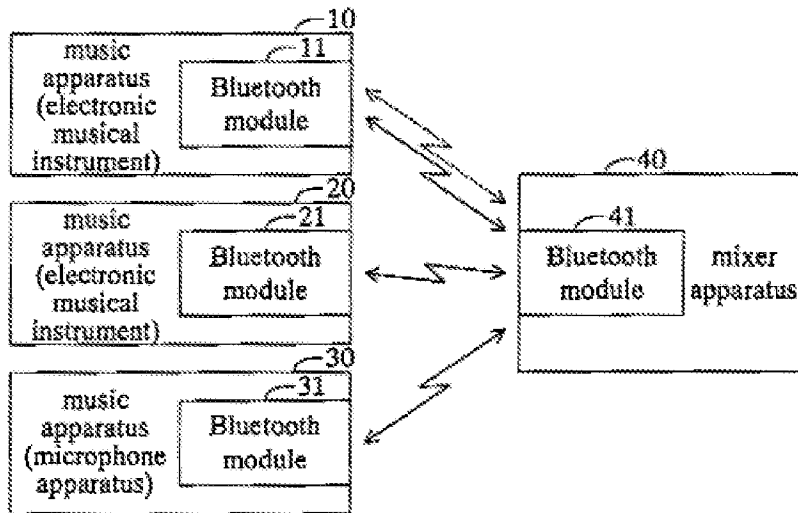


Figure 1 is a block diagram illustrating a network according to one of Ito's embodiments. *Id.* at ¶ 0021. This network is constituted with a plurality of music apparatus 10 to 30 and a mixer apparatus 40 respectively capable of wireless communication with these music apparatus 10 to 30. *Id.* at ¶ 0027.

Figure 2 is reproduced below.

FIG.2

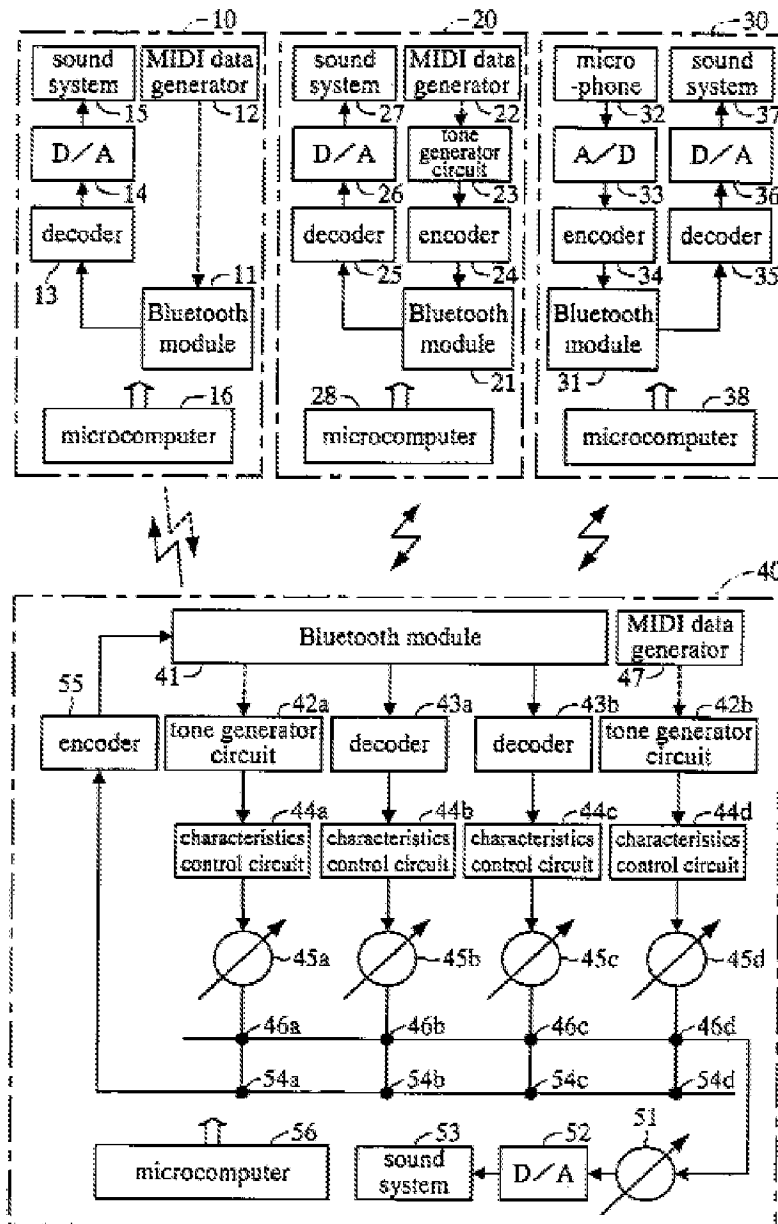


Figure 2 is a functional block diagram illustrating the network of Figure 1 in further detail. *Id.* at ¶ 0022.

Figure 2 shows a single mixer apparatus (40) having a Bluetooth module 41 that receives the MIDI data, digital music tone signals, and digital audio signals respectively transmitted wirelessly from music apparatus 10, 20, and 30. *Id.* at ¶ 0035. The received MIDI data, digital music tone signals, and digital audio signals are respectively applied to tone generator circuit 42a, decoder 43a, and decoder 43b, respectively. *Id.* Mixer apparatus 40 additionally includes a MIDI generator 47 (e.g., a keyboard) that outputs MIDI data independently with no relation to the outside music apparatus 10 to 30 and a tone generator circuit 42b that produces and outputs digital music tone signals (i.e., one type of audio signals) on the basis of the aforesaid generated MIDI data. *Id.* at ¶¶ 0038, 0050.

In mixer apparatus 40, the outputs of tone generator circuit 42a, decoder 43a, decoder 43b, and tone generator circuit 42b are respectively coupled via characteristics control circuits 44a-44d and level setting circuits 45a-45d to additive synthesis circuits 46a-46d for playing on a sound system 53. *Id.* at 0035-39. Mixer apparatus 40 further includes additive synthesis circuits 54a to 54d, of which the output of final stage 54a is encoded (compressed) by encoder 55 and respectively output to music apparatus 10 to 30 via Bluetooth module 41. *Id.* at ¶ 0040.

Presumably because Ito's Figure 2 shows a single mixer apparatus (40), Appellant and the Examiner appear to agree, incorrectly in our view, that Ito fails to disclose a system including plural musical apparatus each containing an audio score mixing mechanism. *See Answer 4* ("Ito does not explicitly disclose at least two such apparatus having an audio score mixing

mechanism . . . .”); Br. 3 (“The Ito reference discloses a system in which only one apparatus on the network has a mixer.”). We conclude that although claim 27 clearly requires plural musical apparatus, *each* including a mixing mechanism, claim 11 does not. Instead, it recites “at least two such apparatus comprising,” which is broad enough to read on two apparatus that collectively include the recited components, such as Ito’s musical instrument 10 and mixer apparatus 40. We are therefore affirming the rejection of claim 11 and its dependent claims 12-15, which are not separately argued, on the ground that Ito discloses the claimed subject matter. Furthermore, for the reasons given below, the rejection of claims 11-15 would be affirmed even assuming “at least two such apparatus comprising” must be interpreted to mean “at least two such apparatus *each* comprising.”

The Examiner’s and Appellant’s position that that Ito fails to disclose a system including plural apparatus each containing an audio score mixing mechanism overlooks Ito’s Figure 3, which is reproduced below.

FIG.3

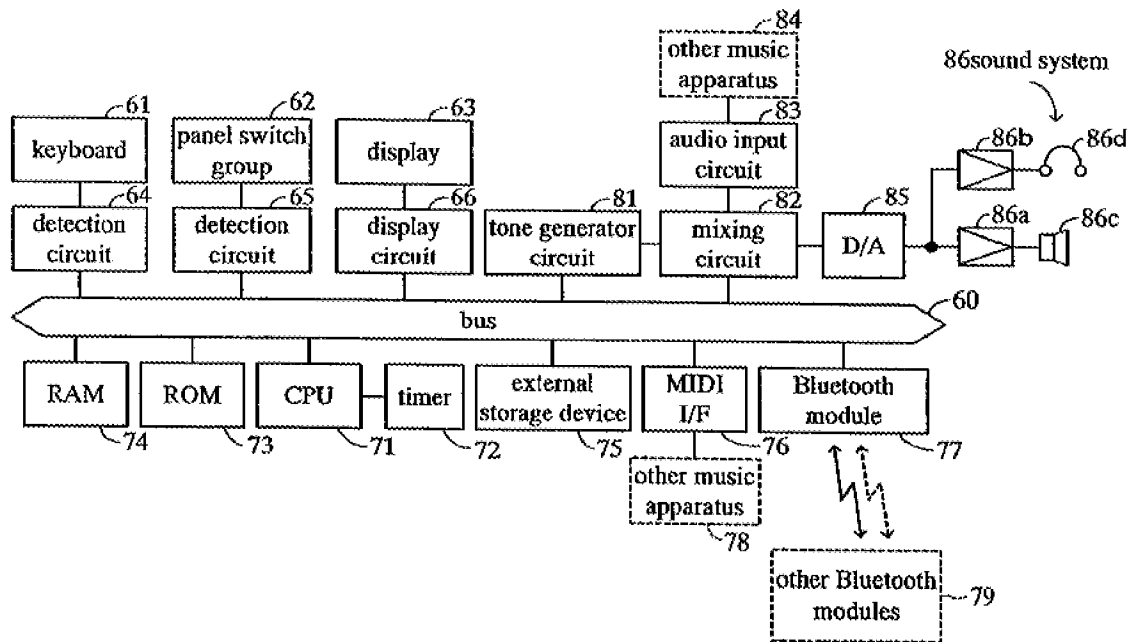


Figure 3 is a block diagram illustrating an embodiment of a music apparatus (electronic musical instrument) and a mixer apparatus of Figures 1 and 2. *Id.* at ¶ 0023. Ito explains that *each* of musical instruments 10, 20, and 30 and mixer apparatus 40 can be implemented with apparatus like that depicted in Figure 3 (*id.* at ¶ 0041), which includes, *inter alia*, a mixing circuit 82 that is receives input audio signals from: (1) a musical keyboard 61 (via bus 60); (2) other music apparatus 78 (via MIDI interface 76 and bus 60); (3) “other music apparatus” 84 (via audio input circuit 83); and (d) “other Bluetooth modules” 79 (via Bluetooth module 77 and bus 60). *Id.* at ¶¶ 0042-46. Bluetooth modules 79 are incorporated in other music apparatus such as electronic musical instruments, sequencers, and microphone apparatus. *Id.* at ¶ 0044. The output of mixing circuit 82 is

connected to D/A converter 85, which converts the digital audio signals from the mixing circuit into analog audio signals for output to sound system 86. *Id.* at ¶ 0047.

The relationship between the Figure 3 apparatus and each of music apparatus 10 to 30 is described in paragraphs 0048-49, while the relationship between the Figure 3 apparatus and mixer apparatus 40 is described in paragraph 0050. Ito explains that “Bluetooth modules 11, 21, 31, 41 of apparatus 10 to 40 are *set in advance* so that music apparatus 10 to 30 may function as slaves and mixer apparatus 40 may function as a master.” *Id.* at ¶ 0053 (bolding omitted; italics added). Furthermore, after explaining how to set the conditions for transmitting and receiving signals between music apparatus 10 to 30 and mixer apparatus 40 (*id.* at ¶¶ 0054-59), which includes steps S10, S11, S20, S21, S30, S31, S40, S41 of Figure 4, Ito explains that because the communication condition is set through those steps, “even if the combination of mixer apparatus 40 with plural music apparatus 10 to 30 is changed, one can meet the change speedily.” *Id.* at ¶ 0078.

For the foregoing reasons, it is clear that *each* one of Ito’s music apparatus 10 to 30 and mixer apparatus 40 contains a mixing circuit 82 (Fig. 3). Appellant has not demonstrated that the foregoing disclosure in Ito fails to satisfy the claim 27 language that is specifically argued by Appellant (i.e., “*plural portable musical apparatus in physically separated proximity with each other and capable of two-way communication therebetween of an audio score over said wireless network, each musical apparatus including: .*”

. . . an audio score mixing mechanism”). Br. 3. Regarding Appellant’s argument that “[i]ncluding a mixing mechanism in *each* of the musical apparatus . . . makes possible a real-time peer-to-peer musical jam session, a real-time peer-to-peer ‘swarm,’ or an ad-hoc musical jam session (specification, page 6, lines 19-20 and page 7, lines 10-12)” (Br. 4), to the extent Appellant is arguing that claims 11 and 27 requires such a capability,” we are unpersuaded because Appellant has not demonstrated that the argued claim language requires such a capability.

For the foregoing reasons, we are affirming the rejection of independent claims 11 and 27 for obviousness over Ito in view of Sitrick without reaching the merits of Examiner’s reliance on Sitrick. *See In re Boyer*, 363 F.2d 455, 458 n.2 (CCPA 1966) (in sustaining multiple reference rejection under 35 U.S.C. § 103(a), the Board may rely on one reference alone without designating the affirmance as a new ground of rejection) (citation omitted). For the same reasons, we are affirming the rejection of dependent claims 12-15 and 28-30, which are not separately argued. *In re Nielson*, 816 F.2d 1567, 1572 (Fed. Cir. 1987).

## DECISION

The rejection of claims 11-15 and 27-30 under 35 U.S.C. § 103(a) for obviousness over Ito in view of Sitrick is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136. *See* 37 C.F.R. § 1.136(a)(1)(iv).



Appeal 2009-003616  
Application 10/684,167

AFFIRMED

ELD

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